



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,979	11/29/2000	Johji Mamiya	JP9-1999-0267US1(8728-457	8978

7590

08/16/2004

Frank Chau, Esq.
F. Chau & Associates, LLP
1900 Hempstead Turnpike, Suite 501
East Meadow, NY 11554

EXAMINER

SINGH, DALIP K

ART UNIT

PAPER NUMBER

2676

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/725,979

Applicant(s)

MAMIYA ET AL.

Examiner

Dalip K Singh

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) 5-12, 17-19 and 23-26 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) 1-4, 13-16, 20, 21 and 28 is/are rejected.
7) ☐ Claim(s) 22 and 27 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to applicant's amendment dated May 28, 2004 in response to PTO Office Action dated February 26, 2004. The amendments to claim(s) 1-3 and 21; addition of new claims 27 and 28; and deletion of claims 5-12, 17-19 and 23-26; and amendment to the specifications have been noted and entered in the record, and applicant's remarks have been carefully considered resulting in the action as set forth herein below.
2. 35 U.S.C. 112, first paragraph rejections for specification has been withdrawn.
3. Claim 2 rejection under 35 U.S.C. 112, first and second paragraph have been withdrawn. Claim 3 rejection under 35 U.S.C. 112, second paragraph has been withdrawn.
4. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. Claim(s) 1, 2, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,606,343 to Tsuboyama et al. in view of U.S. Patent No. 6,380,942 B1 to Hussain et al.
 - a. Regarding claim 1, Tsuboyama et al. **discloses** a host for executing an application (...numeral 4 denotes a host interface which in an interface between a host CPU (not shown)...Fig. 1; col. 2, lines 48-67), the host comprising a pre-processor (graphics processor 6, Fig. 1); and

Art Unit: 2676

a display (display panel 18) connected to the host (...host CPU (not shown)...Fig. 1; col. 2, lines 48-67), the display (display panel 18) displaying an image, wherein said host (host CPU) transfers image data to the display (display panel 18), said display (display panel 18) includes a panel control (display controller 12, Fig. 1) for processing the image data, and a panel memory (line memory 14) for storing processed image data (...transfers the video data to the line memory 14...col. 4, lines 30-32), wherein the processed image data in the panel memory (line memory 14) is displayed as the image. However, Tsuboyama et al. **is silent about** the image data being packetized by a pre-processor. Hussain et al. **discloses** graphics process 116 creating rendering packets which store graphics commands such as rendering packet 200 which is a data structure (col. 5, lines 1-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify device as taught by Tsuboyama et al. with the feature “packetized image data” as taught by Hussain et al. **because** it provides a means for host processor and graphics processors to function in a relatively independent and asynchronous manner thus improving efficiently.

b. Regarding claim 2, Tsuboyama et al. **discloses** wherein said display refreshes the image using image data stored in said panel memory (line memory 14)(col. 3, lines 41-67; col. 4, lines 1-41).

c. Regarding claim 13, it is similar in scope to claim 1 above and is rejected under the same rationale.

d. Regarding claim 15, it is similar in scope to claim 2 above and is rejected under the same rationale.

7. Claim(s) 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,606,343 to Tsuboyama et al. in view of U.S. Patent No. 6,380,942 B1 to Hussain et

Art Unit: 2676

al. as applied to claim 1 above, and further in view of U.S. Patent No. 6,611,260 B1 to Greenberg et al.

a. Regarding claim 3, Tsuboyama-Hussain combination **is silent about** said host transfers image data showing a first resolution to said display and said display scales said transferred image data from having the first resolution to that having a second resolution. Greenberg et al. **discloses** at Fig. 5 a circuit for dimensioning an image using a vertical and a horizontal image scaling circuits which could be using linear interpolation or up and down sampler along with filter for enlarging or reducing an image (col. 8, lines 35-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Tsuboyama-Hussain combination with the feature "scaling digital data of a pixilated image" as taught by Greenberg **because** it improves reliability and lowers cost.

b. Regarding claim 16, it is similar in scope to claim 3 above and is rejected under the same rationale.

8. Claim(s) 4, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,606,343 to Tsuboyama et al. in view of U.S. Patent No. 6,380,942 B1 to Hussain et al. as applied to claim 1 above, and further in view of U.S. Patent No. 6,097,364 to Miyamoto et al.

a. Regarding claim 4, Tsuboyama-Hussain combination **is silent about** said host compressing image data and transferring compressed image data to said display and said display decompresses said compressed image data using said panel control. Miyamoto et al. **discloses** at Fig. 5 wherein compressed data is inputted which in turn is then decompressed by an expansion unit 8 for display (col. 7, lines 18-35; Fig. 5). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Tsuboyama-Hussain combination with the feature "compressed

Art Unit: 2676

data being decompressed on the display side” as taught by Miyamoto **because** it results in reducing the size of the display memory thereby resulting in cost-savings.

b. Regarding claim 14, Tsuboyama-Hussain combination **is silent about** different display characteristics and data quantities. Miyamoto et al. **discloses** three modes of operation performed by operation unit 20 wherein image data receiving means (frame memory 11) receives image data showing different display characteristics and data quantities (...user may select from...one of the three modes...character mode...a halftone mode...image area separation mode...col. 4, lines 40-63). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Tsuboyama-Hussain combination with the feature “user-selectable modes-character...” as taught by Miyamoto **because** it provides an efficient means to discriminate a character/line area and a natural image.

a. Regarding claim 21, Tsuboyama-Hussain combination **is silent about** different processes being performed based on the incoming image data. Miyamoto et al. **discloses** performing different processes based on the incoming data i.e., character mode, halftone mode and image area separation mode (col. 4, lines 40-63). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Tsuboyama-Hussain combination with the feature “various data format processing (col. 4, lines 40-63)” as taught by Miyamoto et al. **because** it results in streamlined processing of image data.

9. Claims 20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,606,343 to Tsuboyama et al. in view of U.S. Patent No. 6,008,794 to Ishii.

a. Regarding claims 20 and 28, Tsuboyama et al. **discloses** a panel for displaying an image (display panel 18); image data receiving means (...numeral 4 denotes a host interface which in an interface between a host CPU (not shown)...Fig. 1; col. 2, lines 48-

Art Unit: 2676

67) for receiving image data from a host side which executes a plurality of applications; a panel control (display controller 12, Fig. 1) for processing the image data; storing processed image data in a panel memory (line memory 14). Tsuboyama et al. **is silent about** performing a color adjustment for said image data. Ishii **discloses** intensity control of RGB (Red, Green, Blue) components of image data (col. 2, lines 1-10) which is similar to the color adjustment as per the instant claim limitation. Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify device as taught by Tsuboyama et al. with the feature "color adjustment" as taught by Ishii **because** it provides a means to reduce screen flicker and artifacts.

Allowable Subject Matter

10. Claims 22 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art teach image display system with plurality of display screens, resolution conversion, parallel processing, display memory.

U.S. Patent No. 6,266,042 B1 to Aratani U.S. Patent No. 5,923,339 to Date et al.

U.S. Patent No. 6,545,683 to Williams U.S. Patent No. 6,486,865 B1 to Ishiyama

U.S. Patent No. 6,222,886 B1 to Yogeshwar U.S. Patent No. 6,064,771 to Migdal et al.

U.S. Patent No. 5,406,306 to Siann et al.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2676

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6:30PM) Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office at telephone number : (703)-306-0377.

dks

August 11, 2004



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600